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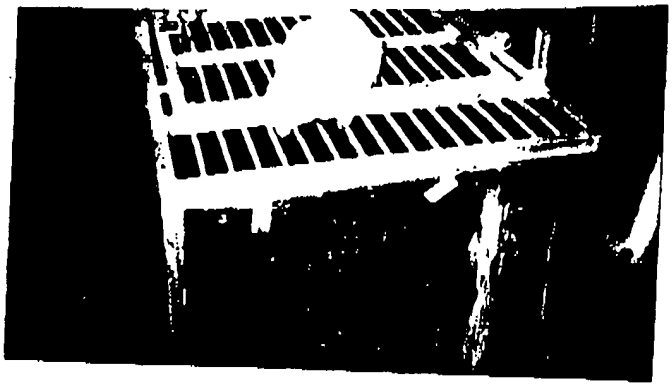
EXHIBIT A



88-891 MM

Do ROI

Full C

2 washout cycles

[redacted]

What to see

Dyspnea - washout initially and then later edema

Used 3 point standards for intensity and ROI measurements

Cat coil 180 - 232 axes

Scout : XM. C

Seq. E24 XM. 5C

Set 90-130 with OC

3 MM slice - 1MM SEQ slice factor 3

TR/TE - 2000/C

OCC @ 13

BC - 50 good

Auto. scales gen.

File Contrast MCAO Pre 1:28

MM62A pre 1:28

Dyspnea

500 mMol/Kg - 500 mMol/Kg

or less. .5 mMol/Kg

TE 50

.5 mMol/Kg - X = 2.4 mMol/Kg

inject 4.8 ml - inject 1 ml/sec over 5 sec.

Start inject at scan 30 or so want it all in by maximum echo.

Minutes Scan time

MCAO Post 1:45 OC-49 CO-40 IM.2 - MM62B

Post 1:58

Post 2:10

- MM62C

APR 1 2 2002 PATENT & TRADEMARK OFFICE

01 [redacted] S-043 (Dysprosium DTPA) IV IONIC CONTRAST M
MCA-O MODEL

11 2.4 kg injected i.v. @ 65 mg/kg Nembutal (≈1.3 ml)

MCA surgery

1.13 MCA-O ® thermocautery + transection

Date: 1.16 w/ CSI

at MAP 117 mm Hg

1:40 T_2W multishot suggests ipsilateral edema LV

1:50 BP drop from 110 → 90 during injection MAP

1:45 S-043 INJECTION OVER 3 min AT 1mM/kg = 2.4 mM (4.8 m

1:49

1:54 MAP 104 mm Hg

2:20 MAP 108 mm Hg

2/20 2:45 Completion of 4 series of T_2W (TR/TE 2800/80) coronal multishot images from septum to midbrain (MCA territory)

M62A 1ST T_2W precontrast post MCA-O → high signal (t = 1:28 pm)

M62B 2nd T_2W 1-12 min post contrast (contrast 1:45 (t = 1:45 → 1:57

M62C 3rd T_2W (t = 1:59 → 2:11

or 3/4 M62D 4th T_2W (t = 2:12 → 2:2

M62E 5th T_2W (t = 2:47 → 2:6

3:00 MAP 112 mm Hg

3:15 MAP 117 mm Hg

1:28

4:30 MAP 116 mm Hg

4:38 ≈ 3 minute contrast injection, moderate hypotension
↕ effect 110 → 111
4:41

4:40 MAP 113 mm Hg

4:41 MAP 110 mm Hg stopped inject

by

5:39 MAP 108 mm Hg

G2B

5:45 MAP 114 HR 150 .3 ml Nembutal I.V. MAP 110 mm Hg HR 140 bpm

G2C

G2F

[redacted]

~~XM~~ XM · 2C · E24 · 128 x 256 x 4

MAG2 F — 3:13
TR 1000/60 NAQ GN 30 BPS 0
5 mm slice next a severe partial volume
overlap effect.
Next to 3mm slice. (Note: remember need to change dephase and Crusher)

MAG2 C
TR · 1500
TE · 60

BPS · 1414
BW · 2000
E128
4,02
5C5C
8,000
11312

Sent data ⇒ No!

MAG2 N
O
P
Q
R

2800/50 → E24
NA/2
OC-49
pre-4:25

Diffusion coefficient of pure H_2O is 2.5×10^{-3} mm

→ C+M slices echo off screen at 0313
4:23

post - 4:35
post - 4:48
post - 5:02
post - 5:37

E24 images stored in files : 1324

Start injection 3cc saline flush

Procedure
check OC
CL ⇒ comp. opacity + load
BO ⇒ 128 dat dat
input file name
1324 → S1 st dat file

Workup
XM 2C
MAG2 N
window size 1C
SI: 5

4:25 Pre-contrast T2W coronal multislice (TR/TE 2800/80)
- increased cortical + BG signal intensity

4:35 Start 1st post-contrast T2W
- high signal cortical + BG (non perfused)

4:48 Start 2nd post-contrast T2W

5:02 Start 3RD post-contrast T2W

5:37 Start 4th post-contrast T2W

6:30 0.3 ml Nembutal I.V.

7:05 Nembutal overdose

50 ml transcardial 2% TTC
brain removed after 20 min - immersed in TTC for 5 min
stored in 10% buffered formalin for 24 h

[redacted]

Coronal sections 5-7 mm thick show infarcted tissue through MCA-O (R) territory

Close correspondence with T2W MRI appearance

CO214A.OAT 2800/80 3/4 OC 52

11.4 minutes 9~50

1 - 4
5 - 8
9 - 12
13 14 15 16

Contast
MI
C → either Index
or H input #'s
Start with 20/120

Tape Backup
I
W initialize
MM62*.dat
Command?
A.
File name:

Tape Read
R
R* - read all subscans
take tape off-line
.DST

window 41-71

left to right reverse
ROI

Command?
A
File name: MM63*.DAT

Command?
A
File name: MM61*.DAT

Command?
B → tape back to beginning
Command?
Q → Quit

- HANG

xR.2C
xy-3
CN 20/20

GG
call up middle b
128 ⇒ ys
CV
3 levels

scale
lamp
valu

↓ down
↑ center bad

Rename S1 - S4
M1 - M4
N1 - N4
O1 - O4
P1 - P4
Q1 - Q4

For listing image comment : control p

1. Pick one ROI then N1, N1, O1, P1, Q1

when yellow type Z ⇒ red box

⟺ in and out box side

↕ up & down

I ⇒ returns integral of box.

total 320 ROI's

type I ⇒ integral

return
return
Q
CV N1
return
return

Choose 2.5 x 2.5 voxel

S. XW - 2.5
YW - 2.5

Exp. 25-10
pos - 300
CIUT - 30010
variableness - 10
exp. 25 - frame1
hit pos.

exp - 30
position - 2
exp

FI - C
start at 70 - 120

AN - I
esi. ANN
AN - S

Ted CSI. ANN

Spectra
xy - 3
CB - C/C

Q
Colse
G GRCSI
CC File
AN
IC